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SITE ANALYSIS

Development Opportunities and Constraints

The North Carolina State Parks System exists for the enjoyment, education, health and inspiration of all North Carolina citizens and visitors. The mission of the state parks system is “to conserve and protect representative examples of the natural beauty, ecological features and recreational resources of statewide significance; to provide outdoor recreational opportunities in a safe and healthy environment; and to provide environmental education opportunities that promote stewardship of the state’s natural heritage.”

Carvers Creek was selected as a state park site for many reasons, including multiple opportunities for education, natural resource protection and recreation. The conservation value of the park is highly significant. Sensitive environmental resources may be seen as opportunities for environmental education and park development, as well as protection and conservation. One of the primary purposes of the master plan process is to determine which areas are most suitable for site development, and which areas must be avoided and protected.

Previous chapters have covered site context and history, regional context and planning issues, existing facilities and infrastructure, and natural resources. Many parameters have been mapped as Geographic Information System (GIS) layers which provide valuable data to be used to prepare the site analysis. This research and mapping, along with field visits, have been compiled into a listing of opportunities and constraints which will be used to guide the programming and master planning for Carvers Creek State Park.

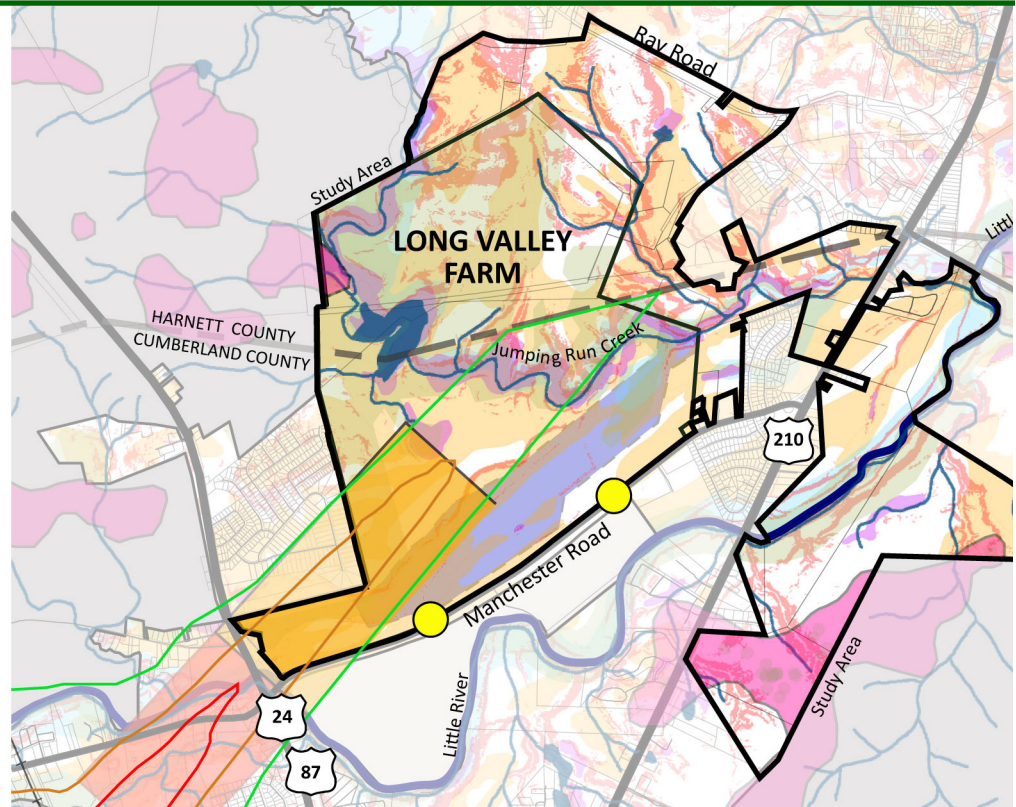
The Sandhills region attracts many visitors due to the proximity to the city of Fayetteville, Fort Bragg and Pope Air Force Base. Located in the central portion of the state, with easy access from I-295, and just 8.5 miles from I-95, the park may grow to have a very high visitation rate. As the expansion of Fort Bragg and the population grows in this area, development demands create competition for land that may be desirable for acquisition by state parks. Figure 5.1 shows the study area and includes parcels, roads, existing hydrology, Significant Natural Heritage Areas, hydric soils, steep slopes, and access points.

In the roughly six miles between Long Valley Farm and the Sandhills Section, there are several large parcels of land in private ownership. The N.C. Division of Parks and Recreation looks forward to working with willing landowners in order to establish a corridor linking the parks through easements or property acquisition as it becomes available. The lack of continuity of the park properties will be confusing for visitors and problematic for operations and maintenance staff. Numerous individual properties require buffers around each property boundary that will diminish the amount of land that is suitable for development within the individual parcels. Individual parcels also increase management issues for operations and management staff due to distance, multiple access points and the extensive number of adjacent neighbors.

Although it would be ideal for the land acquisition to continue southeast from the Sandhills Section to the Cape Fear River Section, major roads, a rail line, and other development has fragmented the available land so fewer larger



Ferns in the Sandhills Section



parcels are available for purchase. Land acquisition in this area would not be deemed to be quite as important as the connection needed between Long Valley Farm and Sandhills due to fragmentation from development. The availability of large parcels, the Significant Natural Heritage Areas, and Red-cockaded Woodpecker colonies between the two properties make the area between Long Valley Farm and the Sandhills Section the highest priority for acquisition. Other conservation partners are working in the southeast portion of the study area on the Cape Fear Greenway. It is possible that important properties in this area will be protected and preserved by others so that easements or acquisitions along the stream corridors in this area could potentially provide connectivity to the Cape Fear River.

As Carvers Creek is a new park in the state park system, there are no existing park activities or functions existing within the study area with the exception of Mendoza Park, owned by the Town of Spring Lake. This facility is adjacent to Long Valley Farm on the southwestern property line. It is an athletically-oriented park with ball fields, playgrounds, and several picnic shelters.

Most of the study area is either forested or farmed. More development is found at the far western edge at Spring Lake, along N.C. 210, and at the southeastern portion along U.S. 401 and I-295 where the land is already subdivided and developed. Long Valley Farm has been recently mowed and farmed, and it has numerous buildings associated with previous uses. It also has active longleaf pine restoration areas. Several acres of the property are part of a stream restoration project by the North Carolina Ecosystem Enhancement Program. Hardwood species are found along drainage ways in the millpond and the blackwater streams. Areas that were previously cleared

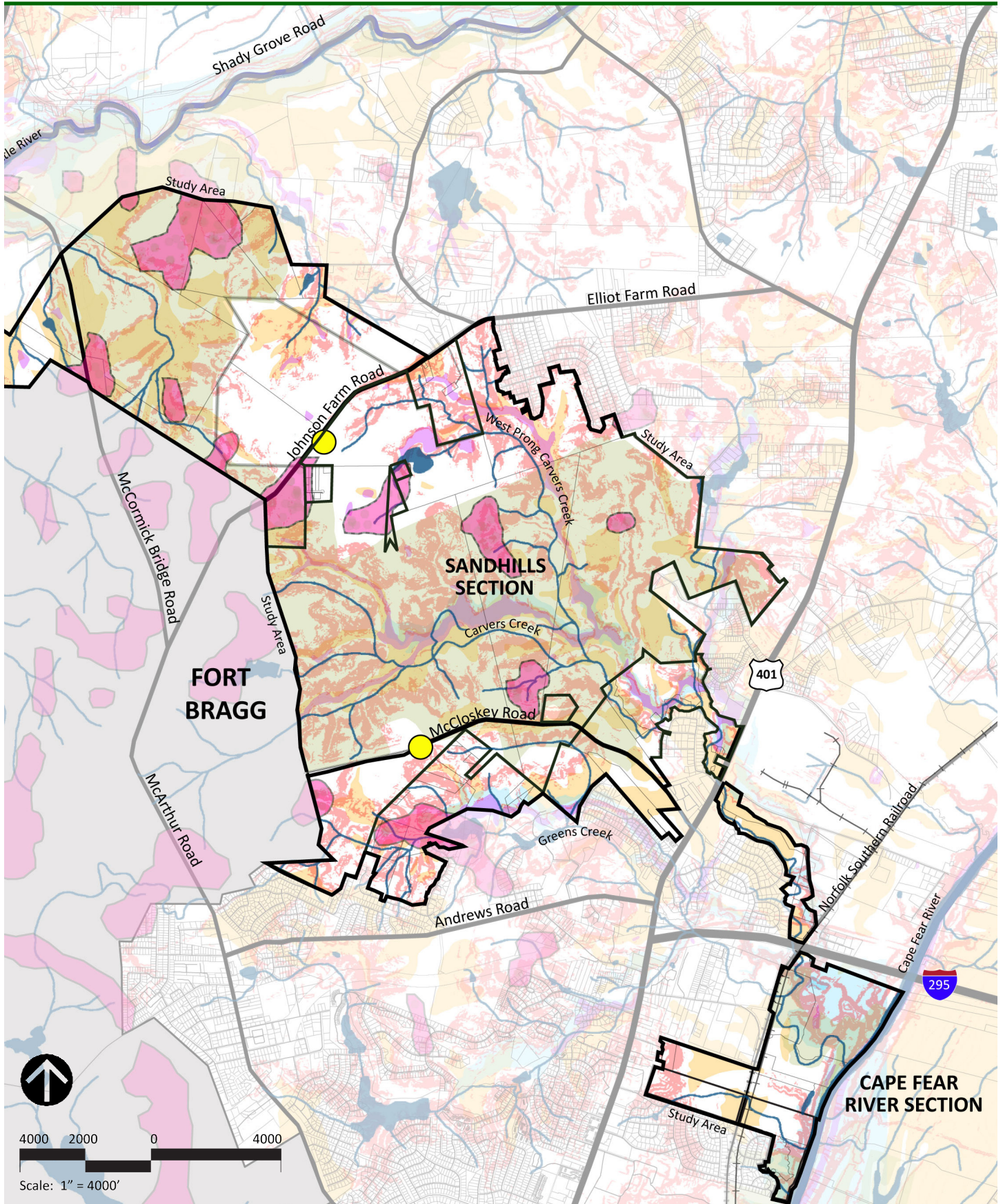


Figure 5.1 Overlay Analysis Map



Cattle at Long Valley Farm



Pasture planted with longleaf pines



Longleaf pines at Long Valley Farm

for farming at Long Valley Farm have been reforested with longleaf pine, but they might provide possible areas for future development that will not require additional clearing of mature trees. The Sandhills Section is mostly wooded with larger areas of mature longleaf pine. Due to the maturity of the trees in this area and the presence of rare species, it is not recommended that large areas be cleared at the Sandhills Section for park development.

Long Valley Farm, Sandhills Section and the Cape Fear River Section have limited opportunities for vehicular access. At Long Valley Farm, the North Carolina Ecosystem Enhancement Program's stream restoration work has left three easements available into the park property. From Manchester Road, there are two 60-foot wide vehicular access easements into the park property, with one 30-foot easement owned by Progress Energy that may be available for pedestrian access only. No other park frontage along any major roads exists to provide another location for a vehicular park access.

Vehicular access is available at the Sandhills Section from either Johnson Farm Road to the north and McCloskey Road to the south. Park frontages do not exist along any other major roads to provide a vehicular park access. The NCDOT would like to abandon the right of way on McCloskey Road, which would provide more usable land for park development and prevent the property from being bisected by the road.

Vehicular access is available at the Cape Fear River Section from Carvers Falls Road. Access road will cross a Norfolk Southern Railroad line prior to entering the property.

Several streets dead-end into the various park properties, which may provide desirable pedestrian access points for neighborhood access. Too many pedestrian access points may become a management problem and dead end streets may become parking areas for park visitors that are disruptive to the adjacent neighbors.

The largest adjacent neighbor is Fort Bragg/Pope Air Force Base. Active training exercises include tanks and artillery practice on the adjacent property, so it is a concern that park visitors are kept safe and the military base be kept secure. Another concern is the proximity of Pope Air Force runway to Long Valley Farm. Figure 5.1 shows military airport operations impacting the Long Valley Farm property with approach zones and noise contours of 65 to 79 Ldn.; 80 Ldn is the noise level of a gas lawn mower at a distance of 100 feet. On average, 11 flights take off and land per hour, and at peak times, it can be as high as 13 per hour. Being in the direct flight pattern of the runway creates an interesting opportunity to view low flying military aircraft, but it can also be dangerous location in the event of a mishap. Noise also disturbs the expected peacefulness of the property.

While the ecological diversity and beauty of the study area offers significant opportunities for park development, it also mandates protection and preservation of sensitive resources. The Long Valley Farm property offers significant historical and cultural resources in addition to environmental assets. The largest environmental constraints for development in the study area will be areas of sensitive habitat, hydrology and soils.

Ecologically sensitive areas create the largest constraint to park development in the study area. Several special status species are found on the properties that require habitat protection. Thirteen rare plant and animal species as well as one endangered species exist within the Carvers Creek study area. The one federally endangered species is the Sandhills Pyxie-moss, and the one state endangered species is the Red-cockaded Woodpecker. A large portion of the study area is located within several Significant Natural Heritage Areas. The natural diversity of plants and animals in these areas are so rare or significant that they merit special consideration when land-use decisions are made. The gum cypress pond, seeps, pocosins, swamps, wetlands, and blackwater streams are major environmental factors in the study area which take up vast amounts of acreage at Long Valley Farm, Sandhills Section, and the Cape Fear River Section.

Soils will be another ecological constraint to development, as hydric soils associated with wetlands are prominent along the extensive stream systems in the study area. Hydric soils include Deloss loam, Johnston loam and Roanoke and Wahee loams. Other sandy soils, such as Gilead and Blaney loamy sand soils, will create problems for development due to the potential for erosion. Although the study area is generally not steeply sloped except along steam banks and at the Cape Fear River, the sandy soils in this region are considered severely limiting for development when steeper slopes are encountered.

Because of the historical significance of Long Valley Farm and its National Register of Historic Places status, it is recommended that the original Farm Seat complex, the main Agricultural Complex and its viewshed be preserved for public enjoyment. Individual buildings within these areas have been evaluated for historical significance and possible adaptive reuse in the master plan development.

Extensive interpretative and educational opportunities exist for the public at Long Valley Farm, such as discussions on gentleman farming and agricultural estates, the history of timber and naval stores, agricultural history, land and agricultural sustainability, and ecological and fire restoration.

Scenic beauty is a more subjective topic, but it is clear that the study area offers opportunities for expansive views that merit consideration for preservation where possible. Significant views within Long Valley Farm include areas of historic and agricultural significance as well as high quality natural areas. It is recommended that these views be preserved as part of the ecological, historic and cultural heritage of the property. The Sandhills Section is limited in significant vistas since it is densely wooded, but there are several areas that offer stunning views of high quality natural areas. The Cape Fear River Section offers scenic views of the Cape Fear River as well as Carvers Falls. The topography of the this section makes this a very unique and special place.

Integrating prescribed fire management into future park development will be important. Close coordination with N.C. Division of Parks and Recreation will be necessary to ensure that park facilities are sited appropriately for proper management of the longleaf pine ecosystem. Opportunities for interpretation of fire management will offer another level of education for park visitors.



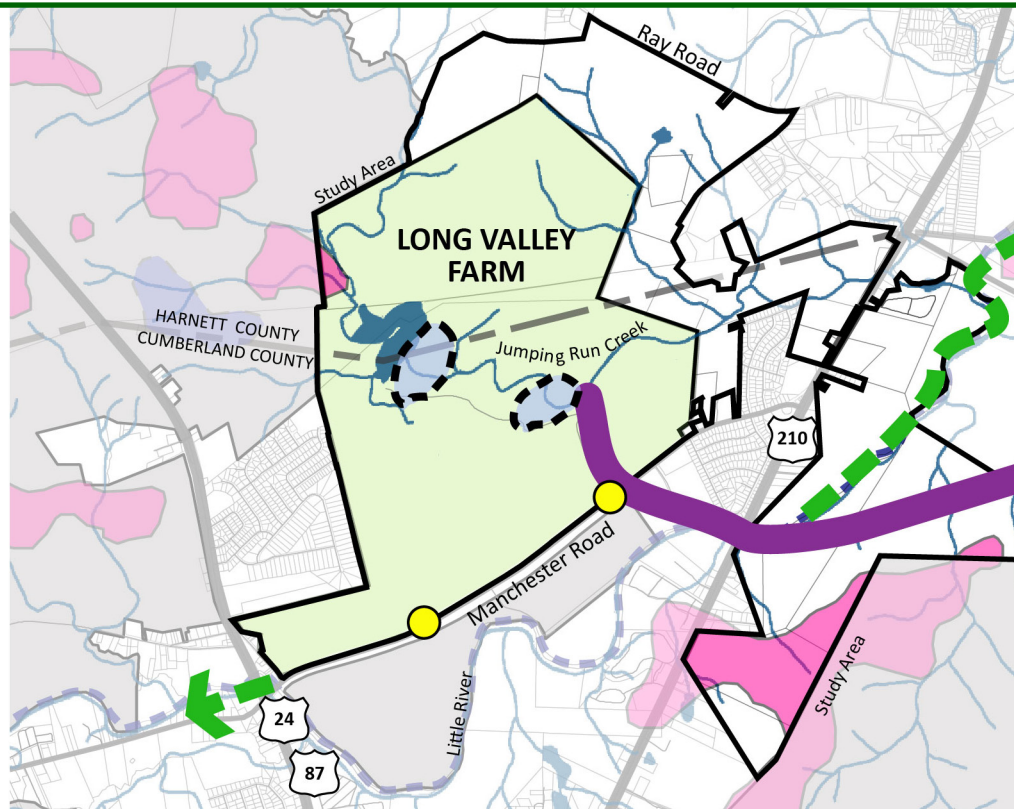
Swamp at Sandhills Section



Existing trail at Sandhills Section



Wet area at Sandhills Section



When all limiting factors are overlaid as shown in Figure 5.2, the resulting map shows pockets of land that could be considered for large areas of extensive new development. Although it is of utmost importance that highly sensitive land be purchased for preservation, it is also desirable for some state park land to be acquired that is not of highly significant historic and ecological value for the construction of park facilities.

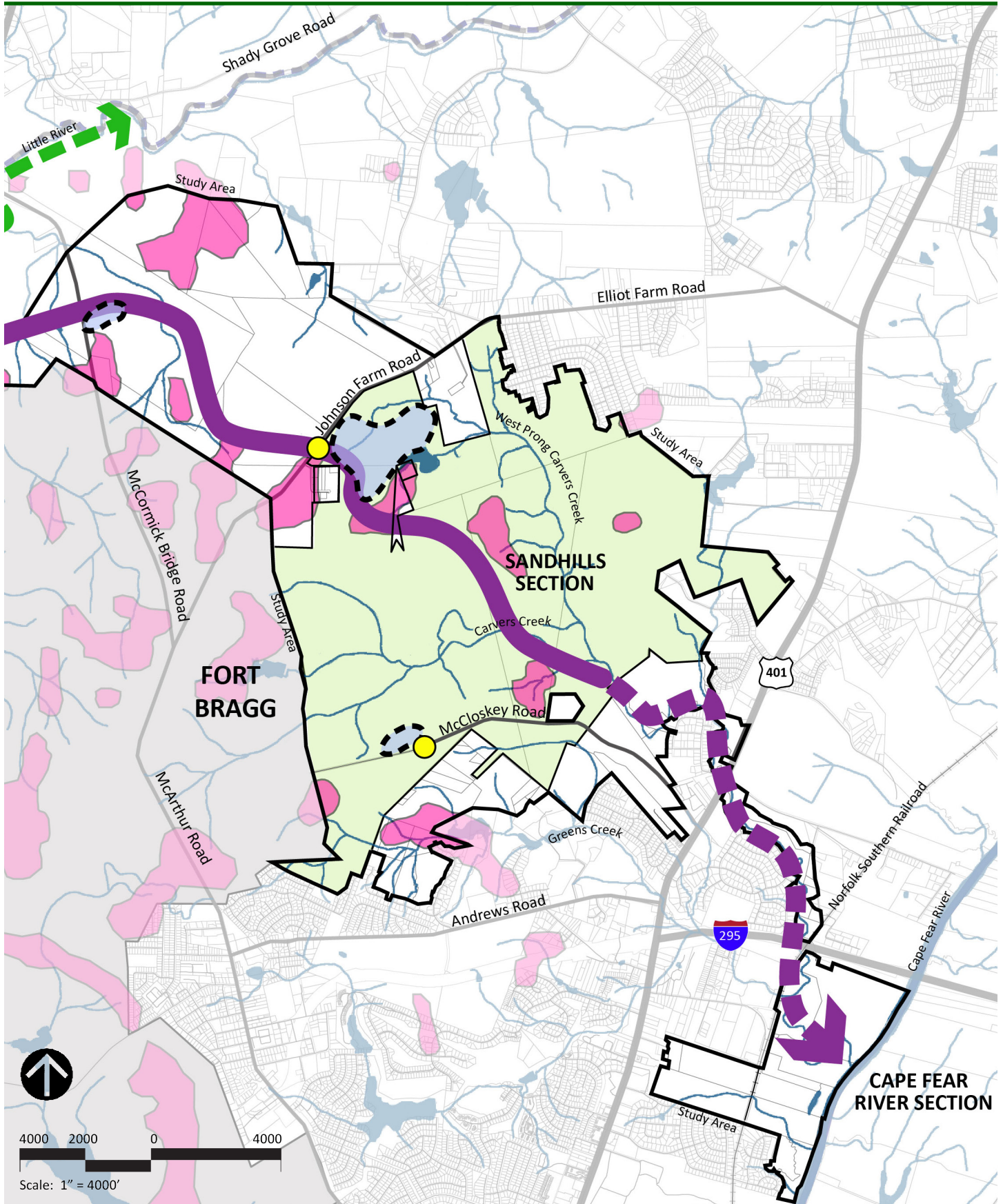


Figure 5.2 Developable Areas Map